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- 26. (Withdrawn) The method of claim 25, wherein the organic-based coating is a phenolic resin.
- 27. (Withdrawn) The method of claim 26, wherein ceramics or cermets may be added to the phenolic resin.
- 28. (Cancel) An apparatus for preventing erosion of wellbore components comprising:

a wellscreen having a screen portion and a perforated inner tube portion; and a coating disposed on the screen portion.

- 29. (Cancel) The apparatus of claim 28, wherein the coating includes nickel and phosphorous, and the nickel concentration is from about 85% to about 95%, and the phosphorous concentration is from about 5% to about 15%.
- 30. (Cancel) The apparatus of claim 28, wherein the coating include an organic-based phenolic resin containing ceramic or cement.
- 31. (Cancel) The apparatus of claim 28, wherein the coating is disposed on the inner tube portion.
- 32. (New) The apparatus of any of the above claims, wherein the screen is fabricated of a woven material.



# **REMARKS**

This is intended as a full and complete response to the Office Action dated March 7, 2002, having a shortened statutory period for response set to expire on June 7, 2002. Claims 1-41 are pending in the application. Claim 1 has been amended. Claims 12-27 have been withdrawn for being drawn to a non-elected invention. Claims 8, 9, and 28-31 have been canceled, and claim 32 has been added.

### I. Restriction

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-11 and 28-31, drawn to a COATED WELLSCREEN, classified in class 210, subclass 506.

II. Claims 12-27, drawn to a METHOD OF COATING A WELLBORE COMPONENT, classified in class 427, subclass 384.

Pursuant to a telephonic conversation with the Examiner on December 10, 2001. Applicants respectfully elect claims 1-11 and 28-31. Group I.

Claims 1-7, 10-11, and 32 are pending in the application. No new matter has been introduced. Please enter the following amendments and reconsider the claims pending in the application for reasons discussed below.

# II. 35 U.S.C. § 102

Claims 1 stands rejected under 35 U.S.C. § 102(a)/(b) as being anticipated by Applicant's Admitted Prior Art. Applicants have amended claim 1. The Examiner states that Applicants admit, "conventional techniques coat only the screen portion of the wellscreen, leaving other components, like the interior base pipe, susceptible to erosion." Applicants respectfully traverse this objection. As amended, Applicant believes claim 1 is in condition for allowance. Claim 1, as amended, incorporates language wherein the entire wellscreen assembly is coated, not merely the screen portion.

Claims 1, 5, 8-9 are rejected under 35 U.S.C. § 102 (b) as being anticipated by *Muecke et al.* (U.S. Patent Number 3,880,223). Examiner states that *Muecke et al.* discloses "coating layers."

Applicants respectfully traverse this rejection. *Muecke et al.* discloses using a fusible material, preferably a wax, to coat the entire wellscreen while its on the surface. Once downhole, the wax is heated due to inner wellbore temperatures, melts away, and thus leaves an undamaged wellscreen downhole. Unlike *Muecke et al.*, the present application does not claim or suggest coating the wellscreen assembly, or the screen portion thereof, in a manner that would at any time inhibit its ability to be fluid-porous. *Muecke et al.* does not teach, show, or suggest having a non-inhibiting coating on the screen portion of the wellscreen assembly. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 1 and 5.

Claims 1-3, 8-10 are rejected under 35 U.S.C. § 102 (b) as being anticipated by *Sato et al.* (U.S. Patent Number 3,871,411). Examiner states that *Sato et al.* discloses "nickel plating."

Applicants respectfully traverse this rejection. Sato et al. discloses a seamless screen pipe comprising a seamless tubular screen plating with a metal film. Sato et al. is neither directed to, nor envisioned for use, in the petroleum industry. In fact, Sato et al. is intended for textile printing. Sato et al. does not teach, show, or suggest a wellscreen assembly consisting of an inner tube and an outer screen. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 1-3 and 10.

Claims 1, 5-9, 28 and 30-31 are rejected under 35 U.S.C. 102 (b) as being anticipated by *Arterbury et al.* (U.S. Patent Number 5,339,895). Examiner states that *Arterbury et al.* discloses "perforated mandrel."

Applicants respectfully traverse this rejection. *Arterbury et al.* discloses a prepack well screen assembly for separating particulate material from formation fluid. *Arterbury et al.* does not teach, show, or suggest coating the wellscreen assembly to prevent erosion or corrosion. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 1 and 5-7.

## III. 35 U.S.C. § 103

Claims 1-4,8-11, 28-29, and 31 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Applicant's Admitted Prior Art in view of *Richardson* (U.S. Patent Number 3,685,582). Examiner states that *Richardson* discloses "plating metal on materials composing or contained in a permeable structure in which the plating solution can be contained or through which it can be flowed, e.g., a heated autoclave, a hot tank or boiler tube, or the like." The Examiner concludes that it would have been obvious to one skilled in the art to employ nickel and phosphorous containing plating disclosed by *Richardson* on the well known wellscreen structure in order to provide a coating thereon.

Applicants respectfully traverse this rejection. First, *Richardson* is directed to electroplating an incompetent earth subsurface earth formation. As described therein, *Richardson* is intended as an improvement in electroless metal plating for consolidating unconsolidated formations at high temperatures; that is, "providing a protective coating on the grains and intergrannular bonding materials of consolidated earth formations in order to distribute metal within a permeable mass, to plug the interstices of a permeable mass." See Column 2. lines 45-51. Thus, *Richardson* 

teaches plating for permeable earth structures, not wellbore components. In contrast, the present application claims coating a wellbore assembly prior to its insertion into a wellbore. Second, the Examiner essentially asserts that the motivation arises from the knowledge or common sense of one of ordinary skill in the art. However, what may have been within the knowledge of one skilled in the art is insufficient absent clear and convincing evidence that one of ordinary skill in the art actually possessed such knowledge. Smith Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347 (Fed. Cir. 1999). Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 1-4, and 10-11.

# IV. 35 U.S.C. § 112

Claims 1-11 and 28-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, Examiner states that the term "wellscreen" is unclear as to what minimal components make up a wellscreen.

Applicants respectfully traverse this rejection. Applicants have amended claim 1 where the term wellscreen has been more clearly defined. As amended, Applicants believe claim 1 and those dependent from it are in condition for allowance.

#### CONCLUSION

The references, neither alone nor in combination, teach, show, or suggest an apparatus for preventing erosion or corrosion of wellbore components as recited in the pending claims. Applicants argue that there is no motivation to combine these references. Specifically, the Examiner failed to show some "objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fritch*, 972 F.2d 1260 (Fed. Cir. 1992). "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *Id.* Furthermore, "it is impermissible to use the claimed invention as an instruction manual or

'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *Id.* 

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the office action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this office action.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the apparatus or process of the present invention. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

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### **APPENDIX**

# IN THE CLAIMS:

The claims have been amended as follows:

- 1. (Amended) An apparatus for preventing erosion of wellbore components comprising:
  - a wellscreen <u>assembly having a perforated inner tube and at least one screen</u> <u>disposed therearound</u>, [and]

the screen being fluid-porous; and

a coating disposed on the wellbore assembly wherein the coating does not inhibit or interfere the fluid-porous nature of the screen.